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**NRO REVIEW COMPLETED**

0210-64  
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**11 AUG 1964**

**MEMORANDUM FOR:** Chairman, CCPC

**SUBJECT:** Vehicles, Sensors and Techniques Applicable to Detection  
of the Reintroduction of Offensive Missiles into Cuba

**REFERENCES:** (a) NSAM-311, 10 July 1964 (TS-128561)  
(b) Memo for CCPC Members, 21 July 1964 (TS-191888)

1. In response to reference (b), the Directorate for Science and Technology has listed high altitude, manned and unmanned, photographic reconnaissance systems which could assist in surveillance against the reintroduction of offensive missiles into Cuba, or which could be made available in a reasonable time with sufficient priorities. The list is attached as Appendix A.

3. Our examination of the questions posed by the CCPC surfaced a number of comments and recommendations regarding non-photographic systems and techniques which are contained in Appendix B.

**SIGNED**

SA/DD/S&T

**Attachments:**  
As stated

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DD/S&T: [ ] (7 Aug 64)

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Appendix A

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Reconnaissance Vehicle/Sensors	Capabilities	Limitations	Comments
CIA U-2's with J-75 engines/Photo-graphic Configuration A cameras Configuration B cameras 112B cameras	Altitude: Range : 2800-3100 NM Speed : 390 Knots  Swath width: 36 miles Resolution : approx. 4 feet Stereo : Overlapping  Swath width: Horizon-to horizon (approx. 500 miles) Resolution : approx. 2.5 feet Stereo : yes  Swath width: 17 miles Resolution : 1 foot Full Stereo	       Unable to record thru cloud cover; at night without illumination; or thru dense vegetation, man-made structures and caves. Optimum results depend on light angles, absence of smoke and atmospheric haze, and target contrast.	6 aircraft available, 2 additional J-75 equipped aircraft available about January 1965.    ILLEGIB  4 cameras operational

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GROUP 1  
Excluded from automatic  
downgrading and  
declassification

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Reconnaissance Vehicle/Sensors	Capabilities	Limitations	Comments
Photographic Balloons (Available light cameras)	Altitude: 90-100,000 feet Range : Essentially unlimited Resolution: Comparable to the U-2 Comparatively inexpensive on unit basis	Low tracking accuracy, but compensatable by numbers.  See U-2 camera limits.	Three available light camera options.
CORONA Photographic Satellite (KH-4)  NRO25X1	Altitude: Approx 100 miles Swath Width: 180 nm Resolution: Approx 10 feet Area search capability. Continuous stereo.	Very high unit costs. Limited launch frequency. Resolution too low for Cuban intell objectives. Severe weather restrictions. One to two passes per day	

Subsonic Drones

Altitude: 50-60,000 feet  
Range : 1400 nm  
Speed : 0.74 Mach  
Resolution: 2.7 feet  
Swath Width: 18 nm  
Swath Length: 255 nm

Probable loss in track accuracy after first leg to  $\pm 5$  nm.

USAF system.  
Launched from C-130.  
All vehicles in inventory.  
JCS plans for Cuban employment exist.

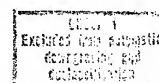
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